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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,449	04/06/2005	Martijn Henri Richard Lankhorst	NL02 0983 US	6730
65913	7590	06/15/2009		
NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			EXAMINER INGHAM, JOHN C	
			ART UNIT 2814	PAPER NUMBER
			NOTIFICATION DATE 06/15/2009	DELIVERY MODE ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BMARTIJN HENRI RICHARD LANKHORST,
FEMKE KARINA DE THEIJE, ERWIN RINALDO MEINDERS,
and RONALD MARTIN WOLF

Appeal 2009-002591
Application 10/530,449
Technology Center 1700

Decided:¹ June 11, 2009

Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1-12. We have

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

jurisdiction under 35 U.S.C. § 6(b).

Claim 1 is illustrative:

1. An electric device with a body having:

a resistor comprising a phase change material which is able to be in a first phase and in a second phase, the resistor having a surface with a first contact area and a second contact area, the resistor having an electrical resistance between the first contact area and the second contact area, the electrical resistance having a first value when the phase change material is in the first phase and a second value when the phase change material is in the second phase,

a first conductor electrically connected to the first contact area,

a second conductor electrically connected to the second contact area,

the first conductor, the second conductor and the resistor being able to conduct a current for heating of the phase change material to enable a transition from the first phase to the second phase, and

a layer of a dielectric material for reducing a heat flow to parts of the body free of the resistor during the heating, the dielectric material comprising a porous material with pores having a size between 0.5 and 50 nm.

The Examiner relies upon the following references as evidence of obviousness (Ans. 2-3):

Ovshinsky	6,141,241	Oct. 31, 2000
Chiang	6,339,544 B1	Jan. 15, 2002
Yan	2002/0134995 A1	Sep. 26, 2002
Hawker	6,670,285 B2	Dec. 30, 2003

Appellants' claimed invention is directed to an electric device comprising a resistor, first and second conductors in contact with the resistor, and a layer of a dielectric material for reducing heat flow to parts of

the electric device free of the resistor. The resistor comprises a phase change material and the dielectric material comprises a porous material having the recited pore size.

Appealed claims 1-4 and 8-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chiang in view of Yan. Claims 5-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the stated combination of references and further in view of Hawker. Also, claim 12 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the stated combination of references and further in view of Ovshinsky.

Appellants do not present arguments that are reasonably specific to any particular claim on appeal. Also, Appellants do not advance separate substantive arguments for the rejections further incorporating Hawker and Ovshinsky. Accordingly, all the appealed claims stand or fall together with claim 1.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for essentially those reasons expressed in the Answer.

Appellants do not dispute that Chiang, like Appellants, discloses an electric device having a resistor comprising a phase change material that is in contact with first and second conductors and a dielectric material for reducing heat flow. As set forth by the Examiner, Chiang teaches that the dielectric material has a low-k value, but Chiang is silent with respect to the porous nature of the dielectric material. However, there is no dispute that

Yan discloses the use of dielectric materials in an electric device that have the presently claimed porosity. Accordingly, based on the collective teachings of Chiang and Yan, we agree with the Examiner that it would have been prima facie obvious for one of ordinary skill in the art to select the dielectric material of Yan for the electric device of Chiang for the benefits taught by Yan, namely, mechanical strength and resistance to moisture.

Appellants contend that the Examiner's rejection is flawed "because it fails to show why one of skill in the art would use the teachings of the Yan reference in the context of the teachings of the Chiang reference" (App. Br. 4, second para.). However, Yan teaches that the porous dielectric material finds utility in semiconductors and other electric devices, in general, and Appellants have presented no technical or scientific reason for why one of ordinary skill in the art would have been dissuaded from using the porous dielectric material of Yan in the electric device of Chiang. Appellants have not identified any specific teaching in Yan that would have precluded the use of the porous dielectric material in the electric device of Chiang.

Appellants also maintain that "[t]he Chiang reference teaches the desirability of low thermal conductivity [whereas] the Yan reference teaches that low thermal conductivity is undesirable" (App. Br. 5, third para.). Chiang, however, in relevant part, teaches that in one embodiment the dielectric material may be silicon dioxide and, in another embodiment, the dielectric material is selected for its reduced thermal conductivity that is less than the value for silicon dioxide (col. 5, ll. 23-30). In addition, Chiang teaches that not all of the dielectric material need be of a material having a thermal conductivity less than that of silicon dioxide (col. 5, ll. 37-47). Accordingly, we conclude that it would have been obvious for one of

ordinary skill in the art to select a dielectric material having a thermal conductivity that is suitable for a particular application. Chiang provides no teaching that the dielectric material must have a thermal conductivity that is higher than the thermal conductivity of the porous dielectric materials fairly taught by Yan.

As a final point, we note that Appellants base no argument upon objective evidence of non-obviousness, such as unexpected results.

In conclusion, based on the foregoing and the reasons well stated by the Examiner, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2008).

AFFIRMED

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